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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,155	06/04/2001	Jae-seong Shim	1293.1206	8787
21171	7590	09/27/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			NGUYEN, DUNG X	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/872,155	Applicant(s) SHIM ET AL.	
	Examiner Dung X Nguyen	Art Unit 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 11 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 - 7 and 11 is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/10/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson et al. (US patent # 4,947,456), and further in view of Yoshida (US patent # 5,315,618).

Regarding claim 8, Atkinson et al. discloses:

- Converting an analog signal to a digital signal (column 5, line 60);
- Checking consecutive sampling points (one of ordinary skill in the art is able to recognize Atkinson et al. as checking consecutive samples including sampling points) from digitally converted signal (column 5, lines 58 - 60).

Atkinson et al. differs from the instant claimed invention that it does not show the step of calculating the jitter value using the sampling points.

However, Yoshida discloses the step of calculating the jitter value using the sampling points (abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Atkinson et al. and Yoshida to provide the fulfilled requirements as the instant claimed invention for correcting the equations of calculating the phase jitter (abstract of Yoshida).

Allowable Subject Matter

3. **Claims 9 and 10 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. **Claims 1 – 7 and 11 are allowed.** The following is a statement of reasons for the indication of allowable subject matter:

Regarding to the claimed invention, the prior art of record fails to show or render obvious of a jitter detecting circuit and a PLL using the jitter detecting circuit. A jitter detecting circuit detects a jitter value of an analog signal converted into a digital signal, wherein the jitter detecting circuit includes an edge detector discriminating signs of two signals from continuous sampling points from input signal, and outputting two signals as first and second edge signals, respectively, if the signs are different from each other; a comparator outputting a smaller absolute value signal among first and second edge signals; an operating unit dividing the absolute value output from the comparator by a sum of the absolute value of the first and second edge signals; an accumulator accumulating outputs of the operating unit during a predetermined period to obtain a jitter value of the predetermined period. An accurate and fast PLL signal can be obtained using the jitter value.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Knapp (US patent # 6,763,060 B1) discloses a communication system employing a network of power managed transceiver that can generate a clocking signal or data enable data bypass of a digital system associated with each transceiver.

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McCarty, Jr. et al. (US patent # 6,704,353 B1) discloses a method and its corresponding apparatus for tracking the magnitude of channel-induced distortion to a transmitted signal.

Brown et al. (US patent # 6,665,342 B1) discloses a method and its corresponding apparatus for producing a still image representation of a motion video.

Yamanoi et al. (US patent # 6,631,103 B1) discloses a jitter feedback slicer.

Maalej. et al. (US patent # 6,249,180 B1) discloses a phase noise and adaptive noise estimation in a QAM demodulator.

Brand et al. (US patent # 4,958,310) discloses a circuit arrangement for obtaining a phase-sensitive control quantity, in particular in a color television receiver.

Contact Information


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (571) 272-3010. The examiner can normally be reached on Monday through Friday from 8:00 AM to 17:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Ghayour Mohammad H. can be reached on (571) 272-3021. The fax phone numbers for this group is (571) 273-3021.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

DXN

September 03, 2004


STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800